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BATHING FACILITY LINER ENSEMBLE

Background of the Invention:

Field of the Invention:

The invention relates, generally, to bathing facility liners, and more specifically, it relates to a mobile and disposable bathing facility liner that provides hygienic protection from previous users of the bathing facility.

Traditionally bathtub liners have been disposed in bathtubs to permit ease of maintenance of the bathtub in use. A removable bathtub liner is exemplified in U.S. Patent Nos. 3,931,651 to Weir and 5,153,950 to Sowers wherein a liner is removable mounted in contact with a top surface of an associated bathtub. However, such liners need a complicated skeleton structure for their mounting and are generally not transportable in the sense that a traveler could not easily carry such a liner on travel.

U.S. Patent 6,336,231 to Smith teaches an inflatable liner for use with convention bathtubs. The inflatable liner is for use with infants, elderly, physically disable or other instances where a cushioned and/or

sanitary bathing surface is desired. A battery-operated air pump is attached to the inflatable liner for inflating the liner. The inflatable liner is compact enough for travel but requires an extensive setup time due to the need for inflation and is too expensive to be a disposable liner.

U.S. Patent 5,216,764 to Hall et al. teaches a bathtub and shower liner ensemble formed of thin, flimsy, disposable, sterile, contoured, impervious, plastic film sheers, with a bottom mat-like sheet secured to the bathtub or shower basin to provide cushion and comfort. The entire liner assembly is compressed to form a single, thin, flexible chaise lining, which is contoured to fit removably into the bathtub. The chase liner is removed through the process of peeling, where the thin, film sheers are individually peeled from the top. Each new film sheer provides a new sterile surface. However, the liner assembly is not transportable for travel by an individual and must be specifically manufactured for each bathtub configuration. Therefore, a one size fits all concept is not possible. Furthermore, the extensive layering provides the mat or cushion effect and the last

few sheets of the liner do not provide much of a cushion effect.

Summary of the Invention:

It is accordingly an object of the invention to provide a bathing facility liner ensemble, which overcomes the herein-mentioned disadvantages of the heretofore-known devices of this general type, which is portable, disposable and provides hygienic protection.

With the foregoing and other objects in view there is provided, in accordance with the invention, a liner ensemble for use with a bathing facility having a drain. The liner ensemble contains a liner having an exterior side, an interior side, a bottom and sidewalls. The liner is removably disposed in the bathing facility and at least partially follows a contour of the bathing facility. A fastener is attached to the exterior side of the liner for securing the liner to the bathing facility. The liner is removable from the bathing facility by disengaging the fastener from the bathing facility.

The liner is removed from the bathing facility by peeling the liner off of the bathing facility. Ideally, the fastener is an adhesive having an adhesive cover disposed on the exterior side of the liner. The adhesive cover is removed from the adhesive for allowing the adhesive to secure to the bathing facility. The adhesive is in a form of adhesive strips disposed spaced apart on the exterior side of the liner. Alternatively, the adhesive is in a form of adhesive patches disposed spaced apart on the exterior side of the liner. Furthermore, at least one of the adhesive strips extends beyond the liner for attachment to the bathing facility.

In an added feature of the invention, the bottom of the liner is formed of a water impervious or water resistant material.

In an additional feature of the invention, the liner is formed of a water impervious material defining the exterior side of the liner and a mat is disposed on at least part of the water impervious material defining the bottom. Optionally, the water impervious material fully

encloses the mat in a sandwich type format. Preferably, the water impervious material has a roughened surface.

In accordance with a further feature of the invention, the liner has a hole formed therein in an area of the drain and a drain cover attached to the liner covering the hole. A ripcord is connected to the drain cover and the ripcord is substantially disposed around a circumference of the hole. Alternatively, the ripcord can be embedded in the liner itself for creating a hole in an area of the drain when the ripcord is pulled.

In accordance with another feature of the invention, a dispenser is attached to the liner. The dispenser contains soap, scent, bubble bath, bath oil, body lotion, moisturizer, and/or color dye. Alternatively, the liner could be coated with the soap, bubble bath, bath oil, body lotion, moisturizer, and/or color dye and is activated by contact with water or the user.

In an alternative embodiment, the liner has a surface with a decorative pattern and/or it is embossed with animal shapes. This provides an entertainment factor to

the user. The decorative pattern is not limited to flowers and such but can incorporate corporate logos such as hotel names, business names, cartoon characters, built-in activities and games, and sports related memorabilia such as NFL, NBA, and NHL memorabilia to name a few.

In accordance with another further feature of the invention, the sidewalls are formed from the water impervious material but do not include the mat. The water impervious material can be a plastic and the mat is formed of cloth, fabric, sponge and/or a compressive material. Ideally, the liner is thin and can be less than 1/16 inches thick or less than 1/32 or even 1/64 inches. It is noted that the liner may be even thinner formed of only a thin plastic layer and a thin fabric layer such as a baby bipster. In this way the liner is compactly packaged and is easily carried on travel.

With the foregoing and other objects in view there is further provided, in accordance with the invention, a liner ensemble. The liner ensemble contains a liner having a bottom with an exterior side and an interior

side. The liner is removably disposable in a bathing facility and a fastener is attached to the exterior side of the liner for securing the liner to the bathing facility. The liner is removable from the bathing facility by disengaging the fastener from the bathing facility. Ideally, the liner has a rectangular shape. Optionally, the liner has sidewalls extending from the bottom and being less than 2 inches high. The liner is formed of a water resistance layer defining the exterior side and a fabric layer defining the interior side. The fabric layer is preferably an imprinted fabric layer containing a design, game, corporate logo, and/or sports memorabilia, to name a few.

Other characteristic features of the invention are set forth in the appended claims.

Although the invention is illustrated and described herein as embodied in a bathing facility liner ensemble, it is nevertheless not intended to be limited to the details shown, since various modifications and structural changes may be made therein without departing from the

spirit of the invention and within the scope and range of equivalents of the claims.

The construction of the invention, however, together with additional objects and advantages thereof will be best understood from the following description of specific embodiments when read in connection with the accompanying drawings.

Brief Description of the Drawings:

Fig. 1 is a diagrammatic, top perspective view of a bathing facility liner ensemble according to the invention;

Figs. 2A - 2C are diagrammatic, partial sectional views of an exterior liner and/or an associated mat;

Fig. 3 is a diagrammatic, bottom or exterior perspective view of the liner;

Fig. 4A is a diagrammatic, plan view of a drain cover;

Fig. 4B is a diagrammatic, sectional view of the drain cover;

Fig. 5 is a diagrammatic, plan view of the bathing facility liner; and

Fig. 6 is a diagrammatic, perspective view of a second embodiment of the liner ensemble.

Description of the Preferred Embodiments:

In all the figures of the drawing, sub-features and integral parts that correspond to one another bear the same reference symbol in each case. Referring now to the figures of the drawings in detail and first, particularly, to Fig. 1 thereof, there is shown a liner 1 which provides a biologically clean liner for a bathing facility such as a bathtub and/or shower to establish a physical barrier between the bathtub and/or shower and the user. The liner 1 provides a low cost contamination prevention system obviating the need to clean and sterilize the bathtub and/or shower before or after each use. More advantageously, the liner 1 alleviates any concern one has regarding, germs, disease, fungus, mildew

and bodily excretions touching a users body being an adult or child taking a bath or shower in a new short-term environment such as a hotel, a motel, and a home of a friend or relative. The liner 1 has a bottom portion 2 that covers a bottom portion of the tub and/or shower and sidewalls 3 that extend up a distance on the sidewalls of the bathtub and/or shower.

As shown in Figs. 2A - 2C, the bottom portion 2 is preferably formed of a mat 4 providing a degree of cushion and structural stability to the liner 1. The bottom portion may have a textured or roughened top surface 8 to provide a frictional engagement surface for preventing a user from slipping when stepping on the liner 1. A roughened surface 9 may also be provided on the bottom surface of the liner 1 to assist in preventing slippage of the 1 liner along the surface of the bathing facility. The mat 4 may be formed of a cushioned material such as a foam material enclosed by an exterior liner 5 formed of a water impervious or resistant material 5. Inherently the liner 1 must be made of a material that is tear resistant so as to not break under the pressure of the users weight. In the embodiment

shown in Fig. 2A, an upper surface of the mat 4 is enclosed by the exterior liner 5. In Fig. 2B only the bottom of the liner 1 has the water impervious material layer 5.

For example, an impervious plastic layer 5 enclosing the inner layer 4 of a supporting compressible material to provide comfort is envisioned. Alternatively, a porous sponge like layer covered on the bottom by a plastic layer is also possible for the mat and exterior liner. The plastic layer 5 is water impervious and at the same time the sponge layer 4 provides an entertainment factor for young children who like to squeeze the water out of the mat 4. Of course the mat 4 can be formed of many other materials such as a soft fabric or cloth so long as a leak proof barrier 5 is provided between the mat 4 and the bathtub. Further alternatives include a mat 4 formed of a bubble wrap type material. Furthermore, the mat 4 may be dispensed with and only the exterior liner 5 can be used as shown in Fig. 2C. Ideally, the mat 4 and the exterior liner 5 can be created as an integrated component.

The liner 1 is configured to follow the contours of a standard bathtub but may be configured to be slightly smaller than a standard bathtub to allow a greater degree of use in types of bathtubs. The liner 1 can be configured to follow the contour of many different types of bathing facilities and is not limited to the standard bathtub shape.

For an entertainment factor, the bottom and/or sides of the liner may be provided with decorations 6 or with built in toys such as sponge animals 7 protruding from the surface of the mat, as shown in Fig. 5.

The sidewalls 3 can be made of the same material as the as the exterior liner 5 with or without the mat 4 lining as shown in Figs. 2A - 2C. However, the sidewalls 3 may also be made out of a different material such as a more flexible material with or without cushioning properties. Alternatively, the sidewalls 3 can be made of a stretchable material for conforming to the shape of the bathing facility. For instance, a flexible plastic would work. The sidewalls 3 are configured to extend up approximately 3/4 the length of the sidewalls of the

bathing facility. Due to its flexible nature, the sidewalls 3 can be adapted to many different types of bathing facility contours. In an alternative embodiment, the sidewalls 3 can be dimension to extend over the sides of the bathing facility.

Fig. 3 is a rear or exterior view of the liner 1. On the leak proof exterior liner 5 and the sidewalls 3 is disposed a fastener such as an adhesive shown in the form of adhesive strips 10, 11. The adhesive strips 10, 11 can run in any manner shown on the exterior liner 5 and are not just limited to the horizontal and vertical directions shown. Furthermore, the adhesive does not have to be in strip form and may be any form such as adhesive patches 12. The form, shape, positioning and number of the fasteners shown are arbitrary. The adhesive has a strip cover 13 to prevent the adhesive 10, 11, 12 from sticking until the customer is ready to use the liner 1. The adhesive sticks to the bathing facility to ensure that the liner 1 does not move when water pours from the facet or when the weight of a body is applied. It is important that the adhesive sticks firmly as a slipping liner 1 is undesirable. In addition, the

adhesive strips may extend beyond the liner 1 and be attached the sidewalls of the bathing facility or walls surrounding the bathing facility.

As shown in Figs. 1, 4A and 4B, the liner 1 may optionally have an opening 20 for accommodating a drain. Ideally, a drain cover 21 is provided over the opening 20. The drain cover 21 is removed when one is finished using the bathtub so as to allow access to the drain for removal. The drain cover 21 provides greater hygienic protection as the drain is also covered. The drain cover 21 has an adhesive on one side and is affixed to the bottom 2 of the liner 1. Imbedded within the drain cover 21 is a loop of a monofilament line in the form of a ripcord 22. When the end of the ripcord 22 is pulled, a drain hole is torn out of the drain cover 21 or the complete drain cover 21 is removed. It is of course obvious to one skilled in the art that the ripcord 22 could be imbedded in the liner 1 itself in a circular format and the pulling of the ripcord 22 creates its own drain hole 20 or tear. Of course the shape of the ripcord 22 is not limited to a circular shape.

The liners 1 can be manufactured in a variety of sizes, colors, designs, patterns and themes. In addition, the liners 1 can include different scents built-in or impregnated in the liners 1 or in a part of the liner 1. Additionally, the liner 1 can be coated 30 with body lotions, lubricants, moisturizing lotions, bath oils, color dyes, soaps, bubble bath, and other such bath items for increasing the users enjoyment. Alternatively, the body lotions, lubricants, moisturizing lotions, bath oils, color dyes, soaps, bubble bath, and other such bath items for increasing the users enjoyment can be incorporated in a built in a dispenser or pocket 31 in the sidewalls or bottom of the liner 1. The dispenser 31 is punctured by pressure from ones hand and the contained lotion, soap, dye, etc. is released.

In addition, the liners 1 can be packaged similar to such products as baby bipsters, zip lock bags, or in boxes to name just a few packaging concepts.

Fig. 6 shows a second embodiment of a liner ensemble having a liner 30 which may incorporate all of the features shown in Figs. 1-5 but are not necessarily shown

for clarity purposes. The liner 30 is similar in detail to the liner 1 with the exception being that the sidewalls 3 are quite small or non-existent. The sidewalls 3 are less than 3 inches and may be any increment of 1, 2, 3 inches or any fraction thereof. Additionally, the liner 30 may be formed of only the mat or bottom part 2 without any sidewalls 3 or mere nubs for sidewalls. In this embodiment, the liner 30 is significantly more compact for packaging and contains only the opening 20 without the drain plug. In this embodiment, the liner 30 may be more appropriate for showers or other types of bathing facilities that do not have the standard bathtub type shape. The liner 30 also contains the adhesive 10-12 with an adhesive cover 13 attached to the bottom 2 and optionally to the sidewalls 3 for attaching to the bathing facility (should sidewalls exist). In this configuration, the liner 30 ideally is formed of a thin plastic layer and a thin fabric like layer so that the liner 30 can be compactly packaged. As shown in Fig. 6, the liner 30 has a generally rectangular shape that generically fits many types of bathing facilities but can be manufactured to any shape depending on the needs of the bathing facility.